



Modeling Quarterly Review Meeting Watershed Modeling

October 5, 2015

CBPO Conference Room - The Fishshack
410 Severn Avenue Annapolis, MD 21403

For Remote Access:

Adobe Connect: <https://epa.connectsolutions.com/modeling/> (enter as guest)

Conference Bridge: (866)-299-3188 code 410-267-5731#

Event webpage: <http://www.chesapeakebay.net/calendar/event/21917>

**10:00 Announcements and Amendments to the Agenda – Dave Montali, WVDEP-
Lee Currey, MDE**

**10:05 Review of Modeling Workgroup Priorities – Lee Currey, MDE - Dave
Montali, WVDEP**

The quarterly review of the Modeling Workgroup priorities with associated timelines will be discussed. In addition, a presentation made to the WQGIT on Phase 6 review process will be discussed.

10:30 Phase 6 Watershed Model Schedule Update – Gary Shenk, USGS-CBP

Gary will present further updates of the development schedule with key links to the 2017 Midpoint Assessment schedule.

10:40 Final Phase 6 Model Land Use – Peter Claggett, USGS

Peter will present the Phase 6 Model final land use classifications that will be used in the fully operational Phase 6 model that will be completed in 2015.

**11:10 Final Phase 6 Land Use Target Loads – Lee Currey, MDE, Olivia Devereux,
Devereux Consulting**

Lee will review the final land use targets that will be used in the fully operational Phase 6 Model.

11:30 Progress on Phase 6 Calibration – Gopal Bhatt, Penn State

The progress and status of the Phase 6 Model calibration will be described.

11:50 WQSTM Calibration Status – Carl Cerco, U.S. CoE ERDC

The Water Quality and Sediment Transport Model (WQSTM) calibration to the August 2015 Phase 6 Model loads will be examined. Initial estimates of tidal marsh attenuation of **nitrogen**, phosphorus and sediment will be discussed as well as the initial estimated loss of attenuation through tidal wetland loss through sea level rise.

12:30 LUNCH

1:00 Community Multiscale Air Quality (CMAQ) Model – Jesse Bash, EPA

Progress in the application of the CMAQ bidirectional ammonia model will be described as well as model estimated nitrogen deposition under 2035 climate change conditions.

1:40 Representing Climate Change in the Watershed Model – Gopal Bhatt, Penn State - Guido Yactayo, UMCES – Kyle Hinson, CRC

An application of the Watershed Model with estimated 2050 precipitation, temperatures, and rainfall intensity will be examined. Development of the model was with a new evapotranspiration approach that uses the full Penman Method to account for atmospheric CO₂ concentrations and stomatal resistance. The simulation will examine the 2050 climate change and the 2050 land use conditions separately.

2:30 Long-term Seasonal Changes in Volume, Rainfall Runoff Ratios, and Intensity – Karen Rice, USGS

An analysis of stream gages across the Chesapeake drainage and the long term changes in discharge that have been observed will be described. Coupled with precipitation data the changes in runoff/precipitation ratios were estimated as well as total changes in discharge that have occurred in different flow percentiles.

3:00 Coupling Carbon, Nitrogen, and Phosphorus Cycles in Coastal Ecosystems: Climate Effects and Trophic Interactions – Mike Kemp, Walter Boynton, and Jeremy Testa, UMCES

An NFS grant aimed at a synthesis of recent findings to develop a deeper understanding of Chesapeake restoration will be described. An element of the synthesis work is an analysis of small tidal embayments, e.g., Gunpowder River, to determine if their restoration is controlled primarily by local sources or by Chesapeake Bay loads.

3:15 ADJOURN